

WHAT IS CLAIMED IS:

1. A substantially pure cocoa extract comprising cocoa polyphenol(s).
2. The extract of claim 1 prepared from a process comprising:
 - reducing cocoa beans to powder,
 - defatting the powder, and
 - extracting and purifying the cocoa polyphenol(s) from the powder.
3. The extract of claim 2 wherein the process of reducing cocoa beans to powder comprises:
 - freeze drying beans and pulp,
 - depulping the freeze dried mass,
 - dehulling the freeze dried cocoa beans, and
 - grinding the dehulled beans.
4. The extract of any one of claims 2 or 3 wherein the process further comprises purifying the extract by gel permeation chromatography and/or by preparative high performance liquid chromatography (HPLC).
5. The extract of claim 4 containing polyphenol(s) of at least one cocoa procyanidin selected from the group consisting of: (-)-epicatechin, procyanidin B-2, procyanidin oligomers 4 through 12, procyanidin B-5, procyanidin A-2 and procyanidin C-1.
6. An antineoplastic composition comprising a substantially pure cocoa extract or synthetic cocoa polyphenol(s) and a suitable carrier.
7. The antineoplastic composition of claim 6 which is comprised of a substantially pure cocoa extract containing cocoa procyanidin(s).
8. The antineoplastic composition of claim 7 wherein the cocoa procyanidin(s) are prepared from a process comprising:
 - reducing cocoa beans to powder,
 - defatting the powder, and,

extracting the cocoa procyanidin(s) from the powder.

9. The antineoplastic composition of claim 8 wherein the process of reducing cocoa beans to powder
5 comprises:

freeze drying beans and pulp,
depulping the freeze dried mass,
dehulling the freeze dried cocoa beans, and
grinding the dehulled beans.

10 10. The antineoplastic compositions of any one
of claims 8 or 9 wherein the process further comprises
purifying the extract by gel permeation chromatography
and/or by preparative high performance liquid
chromatography (HPLC).

15 11. The antineoplastic composition of claim 10
containing polyphenol(s) of at least one cocoa
procyanidin selected from the group consisting of: (-)-
epicatechin, procyanidin B-2, procyanidin oligomers 4
through 12, procyanidin B-5, procyanidin A-2 and
20 procyanidin C-1.

12. A method for treating a patient in need of
treatment with an antineoplastic agent comprising
administering to the patient an antineoplastic
composition comprising an effective quantity of a
25 substantially pure cocoa extract or synthetic cocoa
polyphenol(s), and a suitable carrier.

13. The method of claim 12 wherein the
antineoplastic agent is comprised of a substantially pure
cocoa extract containing cocoa procyanidin(s).

30 14. The method of claim 13 wherein the cocoa
procyanidin(s) are prepared from a process comprising:
reducing cocoa beans to powder,
defatting the powder, and,
extracting the cocoa procyanidin(s) from the
35 powder.

15. The method of claim 14 wherein the process
of reducing cocoa pods to powder comprises:

freeze drying beans and pulp,
depulping the freeze dried mass,
dehulling the freeze dried cocoa beans, and
grinding the dehulled beans.

5 16. The method of any one of claims 14 or 15
wherein the process further comprises purifying the
extract by gel permeation chromatography and/or by
preparative high performance liquid chromatography
(HPLC).

10 17. The method of claim 16 wherein the extract
contains polyphenol(s) of at least one cocoa procyanidin
selected from the group consisting of: (-)-epicatechin,
procyanidin B-2, procyanidin oligomers 4 through 12,
procyanidin B-5, procyanidin A-2 and procyanidin C-1.

15 18. A kit for treating a patient in need of
treatment with an antineoplastic agent comprising a
substantially pure cocoa extract or synthetic cocoa
polyphenol(s) and a suitable carrier.

19. The kit of claim 18 wherein the
20 antineoplastic agent is comprised of a substantially pure
cocoa extract containing procyanidin(s); and, the kit
includes instructions for admixture of ingredients and/or
administration to the patient.

20 20. A lyophilized antineoplastic composition
comprising a substantially pure cocoa extract or
synthetic cocoa polyphenol(s).

21. The lyophilized antineoplastic composition
of claim 20 wherein the composition is comprised of a
substantially pure cocoa extract containing cocoa
30 procyanidin(s).

22. An antioxidant or preservative composition
comprising a substantially pure cocoa extract as claimed
in claim 1 or synthetic cocoa polyphenol(s).

23. A topoisomerase-inhibiting composition
35 comprising a substantially pure cocoa extract as claimed
in claim 1 or synthetic cocoa polyphenol(s).

24. A method for preserving or protecting from oxidation a desired item comprising contacting the item with a composition as claimed in claim 22.

25. The method of claim 24 wherein the item is
5 a foodstuff.

26. A method for inhibiting topoisomerase which comprises contacting topoisomerase with a composition as claimed in claim 23.